Amendments to the Claims

The following listing of claims is intended to replace all prior versions of claims in the application and includes all claims now active in the application, along with the status of each. In this listing, insertions are underlined, as follows: <u>inserted text</u>. Deletions are struck through in bold type, as follows: **deleted text**, or indicated with double square brackets in cases where strikethrough text is difficult to see, as follows: [[4]].

1.   (Currently amended)   A communications network, comprising:

a plurality of nodes including at least one earth station; and

at least one spacecraft, wherein said spacecraft comprises an active node of said network and wherein the active node is dynamically reconfigurable to support open system interconnection (OSI) modeled communication<u>, and wherein said active node includes a network layer conforming to the OSI reference model and dynamic reconfiguration includes adapting said network layer for at least one of internet protocol and asynchronous transfer mode protocol</u>.

2.   (Previously presented)   The network of claim 1, wherein said active node includes a physical layer and a link layer conforming to a protocol of an OSI reference model.

3.   (Canceled)

4.   (Currently amended)   The network of claim **3** <u>2</u>, wherein said active node further includes a transport layer conforming to the OSI reference model.

5.   (Previously presented)   The network of claim 4, wherein said active node further includes an application layer conforming to the OSI reference model.

6.   (Previously presented)   The network of claim 1, wherein said active node comprises a node operating system (nodeOS) and at least one node execution environment (EE).

7.   (Previously presented)   The network of claim 1, comprising a terrestrial data link.

8.   (Previously presented)   The network of claim 7, wherein said terrestrial data link comprises a Public Switched Telephone Network.

9.   (Previously presented)   The network of claim 7, wherein said terrestrial data link comprises a wireless data link.

10.   (Previously presented)   The network of claim 1, wherein said earth station is configured to transmit at least one object to said active node.

11.   (Previously presented)   The network of claim 2, wherein said physical layer and said link layer of said active node are configured to communicate with said earth station node using a transfer control protocol – internet protocol (TCP/IP) transmission protocol.

12.   (Previously presented)   The network of claim 11, wherein TCP/IP protocol is transmitted using asynchronous transfer mode (ATM) techniques.

13.   (Currently amended)   A method for dynamically configuring a spacecraft to function as an active node of a communications network, the method comprising:

      transmitting an object from an earth station to said spacecraft, said object comprising at least one method for configuring said spacecraft to include a node operating system and at least one execution environment and wherein said

-3-

spacecraft is dynamically reconfigurable to support open system interconnection (OSI) modeled communication, and wherein said spacecraft includes a network layer conforming to the OSI reference model and wherein the dynamic reconfiguration comprises executing code in the execution environment and the executable code comprises adapting the network layer for at least one of internet protocol and asynchronous transfer mode protocol.

14.   (Currently amended)   A method for dynamically configuring a satellite to communicate over a network comprising at least one earth station and at least one satellite in accordance with an open system interconnection (OSI) reference model, the method comprising:

transmitting an object from an earth station to a satellite, said object comprising data conforming to at least one protocol and said object further comprising executable code for implementing said protocol at said satellite;

receiving said object at said satellite;

extracting at least said executable code from said object at said satellite;

temporarily storing at least said executable code in memory at said satellite;

dynamically reconfiguring the satellite to support the OSI reference model; and

executing said code for implementing at least one layer of the OSI reference model, including adapting said network layer for at least one of internet protocol and asynchronous transfer mode protocol.

15.   (Previously presented)   The method according to claim 14, wherein said at least one layer comprises a physical layer and a data link layer.

16.   (Previously presented)   The method according to claim 14, wherein said at least one layer comprises a network layer.

17.   (Previously presented)   The method according to claim 14, wherein said at least one layer comprises a transport layer.

18.   (Previously presented)   The method according to claim 14, wherein said at least one layer comprises an application layer.

19.   (Canceled)

20.   (Previously presented)   The method according to claim 14, wherein said step of executing said executable code includes at least one of the steps of data fusion and packet dropping.

21.   (Canceled)